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ABSTRACT

Results of New Hampshire's first biennial Educational Assessment Program involving 7,500 public school students in grades 5, 9, and 12 are reported. Multiple choice and essay tests were administered in reading, writing, mathematics, state and national history, and government. Instructional assistance--including workshops, suggested classroom activities, and curriculum development assistance--were to be offered by the State Department of Education, based on test results. Test results showed: (1) fifth and ninth graders performed well in mathematics; (2) fifth graders performed well in language arts; (3) twelfth graders' reading comprehension improved markedly over ninth graders; (4) girls demonstrated higher achievement than boys in writing skills; and (5) students in grades 9 and 12 showed strength in history and government. (MH)

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a summary report

1978 New Hampshire Educational

Assessment Program

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This report is a summary of the 154-page document, REPORT TO THE NEW HAMPSHIRE GENERAL COURT, that was prepared by

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PREFACE

This document is a summary report of the 1978 New Hampshire Educational Assessment Program, the state's first biennial education assessment. It is the culmination of months of effort by the Department of Education to present to the citizens of this state information about the educational progress of public school students throughout New Hampshire.

During the week of October 30, 1978, approximately 7,500 public school students participated in a state assessment which focused on reading, writing, mathematics, and state and national history and government. Samples of students at grades five and nine were given multiple choice tests in the English language arts or mathematics. Samples of students at grades nine and 12 were given multiple choice tests in American history or New Hampshire history and state and national government. Students at grades five and nine were also asked to complete a writing sample.

The State Department of Education will use the results to develop instructional assistance in the subjects assessed. Department consultants will use the results to plan meaningful workshops, develop suggested classroom activities, and offer additional curriculum planning assistance to local school personnel.

The tests used by the New Hampshire Educational Assessment Program reflect only a portion of the school curriculum. The program is not intended as a means of judging the adequacy of the total educational program. The results furnish a profile on how well New Hampshire public school students are able to demonstrate certain skills and knowledge in reading, mathematics, writing skills and state and national history and government. The profile presents an analysis of data from the state at large. It does not identify individual students or schools.

In reviewing this information, it should be kept in mind that this is a report on the achievement level of New Hampshire students, not on the quality of the state's educational system. Although educational quality does of course affect student achievement, many other factors that relate to student performance such as socioeconomic status or proportion of urban to rural population, need to be taken into account. In this assessment, it was found that New Hampshire students scored significantly above national norms in most content areas. However, to attribute this performance to a specific cause would require a more detailed study than the one reported here.

Note that this is a report of average performances across the state; it does not provide a picture of performance specific to a school or district. Each school may find variations of strengths or weaknesses in certain subject areas for its own students, and should conduct a local assessment to find its own patterns of growth. The model established by the New Hampshire Educational Assessment Program can help schools do this.

The bases for the test content in each subject area were developed by committees having broad representation. After those groups had determined what was to be measured appropriately in New Hampshire, consultants in the Department of Education developed the tests. Consultants from private firms were hired to review the tests and to select the sample of students to be tested. Once this work was completed, professional employees in the Department underwent training and then administered the tests in schools throughout New Hampshire between October 31 and November 2, 1978. Essay tests and open-ended questions were scored by subject area teachers from the public schools, and the results were coded on machine-scorable answer sheets. These results were processed along with the answers to the multiple choice tests, and various test analyses were produced.

It should be emphasized that an average test score is, by itself, meaningless. Such scores are largely a function of how difficult the questions are, and the constructor can manipulate them with ease. For example, fifth grade students averaged 73.1 percent correct on their mathematics test; ninth graders averaged 65.6 on their test. This does not necessarily mean that fifth graders are better in math than ninth graders; in this case, they just had an easier test. The only content area for which average percentage correct scores can be compared across grades is in history and government, for here both ninth and twelfth graders were given the same test.

One additional issue must be raised that has a bearing on the grade 12 results. Since only those who are in school were tested, some gains from grade nine to grade 12 could be expected, due to the changed population. While exact figures are difficult to come by, enrollment data indicate that between 15 and 20 percent of the ninth graders leave public school before they enter the twelfth grade, a figure that is well above the national average. It is not known how many of these leavers are transferring to other schools, such as private schools, and how many are drop-outs. Consequently, gains from grade nine to grade 12 in New Hampshire are difficult to interpret, since the two populations may be distinctly different from each other.

SUMMARY

The results showed that New Hampshire students did well in the mathematics test at both grades five and nine. They demonstrated mastery of computational skills almost universally, doing particularly well in addition and multiplication. The areas of problem solving and applications were not mastered to the same degree, and there is some concern about performance on problems involving percents. Students at both grades performed well in geometry and in the use of charts and graphs.

Students in grade five did quite well on the English language arts test, where they showed mastery on items testing word meaning skills appropriate for their age. They also did well on reading comprehension, although they demonstrated a need for familiarity with out-of-school reading materials. In this area, ninth graders did not perform as well as could be hoped; on several items they showed reading comprehension skills that were only marginally better than those of the fifth graders. However, test results for twelfth grade students showed their reading comprehension to be markedly improved over that of the ninth graders.

The results of the writing sample showed a wide variety in writing skill, with girls showing a much higher level of achievement than boys. Students at grades five and nine demonstrated good mastery of most of the mechanical aspects of writing, but improvement is apparently needed in the organization and flow of writing, as well as the ideas about which students decide to write. Spelling was a weakness; it was highly phonetic. Student handwriting was judged as good and almost all the essays were legible.

Students in grades nine and 12 showed strengths in history and government as well. They appear to know more about government than history, and more about the United States than New Hampshire, but as they move from grade nine to grade 12 they tend to grow equally in all areas. The results from a standardized test show that, relative to a nationwide sample, New Hampshire students are stronger in applying and using historical information than they are in memorizing it. In two open-ended questions, students showed a willingness to appeal to high levels of authority to address issues of concern to them, and a growing belief that they personally can have an influence on their local government.

SPECIFICS

I. Mathematics

Samples of students in grades five and nine in New Hampshire took a multiple choice test in mathematics. The fifth graders took a 42 item test covering seven objectives; the ninth grade test had 51 items, measuring the same seven objectives plus two additional ones.

On both tests, there were more questions related to computational skills than any other objective. At both grades, students seem to have adequate attainment of these skills. Over nine out of ten fifth graders know their addition facts; and eight out of ten, their multiplication facts. Virtually all who know their addition and multiplication facts were able to apply them in exercises requiring regrouping. About the same number who could multiply could subtract. As the problems became more complex--using numbers with more digits--significantly fewer students could multiply, while students were able to handle the added complexity in addition and subtraction very well. Division was somewhat weaker at grade five. About seven in ten could divide 125 by 5, but less than half could divide 15 into 345.

Ninth graders also did well on computational skills. Very high results were observed on such skills as adding columns of numbers, subtracting numbers up to four digits, multiplication of fractions, and other fairly complex skills. As with the fifth graders, if there is an area of weakness, it is in the area of division: on a problem involving division of an integer by a decimal number, more than two out of five students either could not divide or could not properly place the decimal point.

The objective covered by the second largest number of items was that of problem solving. While this is an area of concern equal to, if not exceeding, computation, about three out of five students were able to solve standard word problems ("Betty's dog eats 2 biscuits a day. How many days will it take the dog to finish a package of 24 biscuits?"). In the ninth grade, about three out of four were able to solve such problems. Since most appear to have the computational skills (and the results from the English language arts tests indicate that reading skills seem more than adequate for these problems) it would seem that students lack the reasoning skills needed for problem solving. This is an area which needs greater attention.

Ninth graders performed poorly on questions involving percents. Scores ranged between 33.5 and 54.1 percent correct depending on the complexity of the question. The poorest performance by ninth graders was on problem solving questions involving percentages.

Applications, another type of problem solving, should also be reviewed by schools, particularly at grade nine. While there were too few questions from this area on the test to make a good generalization, it appears that performance in this area was at about the same level as problem solving.

The results from the items measuring "Alertness to Reasonable Results" provide schools with information that can also be used to review curricula. About three fifth graders in five can round off numbers, and about two in five can properly use the symbols for greater than and less than. Should these concepts be taught? Are they being taught? These are questions that should be addressed at the local level. And while the answers might vary from community to community, the questions should be asked universally.

Another issue related to this objective which schools should consider occurs at grade nine. While it appears that the vast majority of ninth graders can round off numbers, it is not clear that they can apply this skill to help them find estimates for answers to problems. Schools should be alert to checking whether their students are acquiring this skill.

Fifth grade students demonstrated virtual mastery of the geometry items on the test. Almost all can identify rectangles and triangles, and can identify two objects of similar size and shape.

Ninth graders were not as consistent in the mastery of their geometry items. Some skills clearly are very high, with mastery demonstrated across the state. Ninth grade students can identify points on a grid, and seem to know the definitions of more complex words, such as "parallelogram" and "parallel." Not nearly so many--between a half and two thirds--know the relationship between a radius and a diameter. The weakest skill in geometry, however, was the concept of area. About two-thirds of the students seem to understand the basic concept, but very few can calculate the area of a simple plane figure.

The results of the measurement items at both grades five and nine seem to indicate that students possess an uneven ability with these skills. This is

an area for which statewide generalizations are not warranted, and it is suggested that each school review for itself its student's ability to succeed on items of a similar nature.

Since we live in a society which often uses charts and graphs, it is pleasing to note the high percentage of students who were able to succeed on items related to this area. Students were able to obtain basic information from graphs. They show a need to improve in the application of the data they obtain. The test questions from this area that measured higher level skills, such as inference, contained an element of problem solving. Again, students did poorly on such items. This is consistent with the observations made earlier about problem solving.

The remaining items in the ninth grade test measured probability ("Using Mathematics to Predict") and knowledge of computers and calculators. The ninth grade results indicate that more than half the students have had some experience with the skills tested. These results are significantly better than were expected. Thus, it seems that increasing attention is being paid to these areas.

The results show that, at both grades, boys performed better than girls on more difficult items, and girls better than boys on easier items. This trend was very strong. Attempts to determine reasons for this from the available data were unsuccessful. However, this observation does not seem to be related to any particular objective tested or to the presence of sex-oriented language in the questions. The answer to this puzzle should be pursued, for in the answer might lie information that would help schools to improve the skills of both sexes.

It is interesting to note that in New Hampshire both fifth graders and ninth graders scored significantly above national averages established by National Assessment of Educational Progress (NAEP) in 1972-1973. While the

purpose of the assessment was not to make such comparisons, but rather to establish baseline data, it is encouraging how positive the comparisons are.

II. The English Language Arts

Samples of students in grades five and nine were given two sets of examinations in the English language arts--a multiple choice examination (43 items in the fifth grade, 52 in the ninth) and a writing sample. The multiple choice tests measured word meaning, reading comprehension, and study skills. The writing sample required students to produce written work. In addition, some questions on the history and government examinations were related to reading comprehension. These same items were given to ninth and twelfth graders; therefore an estimate of the growth that took place between these two grades in reading comprehension is included in this section.

The word meaning items provided results that were extremely high at both grades. The majority of items were answered correctly by more than nine out of ten students. An analysis of these items indicates that they measured word meaning at a rather sophisticated level. Thus, word meaning appears to have been mastered by the vast majority of New Hampshire students.

While results on the comprehension items are high, they are not as consistently high as those on the word meaning items.

While students scored well on those items requiring literal reading, they performed less well on those requiring them to make inferences or to distinguish fact from opinion.

In addition, it is clear that students are not as familiar with reading material that has practical application outside of school as they are with standard textbook reading passages. In particular, results on those items related to the reading of TV Guide at both grades and the reading of a recipe at the

ninth grade are not as positive as other results. It might be worthwhile for school systems to introduce more practical reading material into the classroom.

The scores on those items dealing with study skills are satisfactory, although higher scores would have been desirable since students will need to apply these skills in order to complete their education successfully. But for fifth and ninth graders, New Hampshire students appear to be making good progress toward mastering these skills.

As was true in mathematics, ninth grade boys scored better than girls on more difficult questions. Unlike mathematics, this trend was not true at the fifth grade. Additionally, it was clear that the type of material presented had a marked effect on reading comprehension at the ninth grade. On questions related to a recipe, girls outscored boys by a significant margin, while the reverse was true on a question related to the term "horsepower." One possible explanation is that students have more experience with reading material related to traditional male-female sex roles. However, sufficient data was not collected to substantiate this. It may be an area that local districts should investigate.

On the limited set of items taken by both fifth and ninth graders on which NAEP norms are available, the growth of New Hampshire students from grade five to grade nine is about half the national average. While fifth graders scored well above national averages, ninth graders did not. It is possible, therefore, that the growth of New Hampshire ninth graders has fallen slightly behind.

Counteracting this finding is the extremely large growth from grade nine to grade 12 on the history and government items related to reading comprehension. One possible reason for the large growth from grade nine to grade 12 is that a greater proportion of New Hampshire students drop out of school between

grades nine and 12 than is true nationwide. While this may explain part of the difference, that reason alone is insufficient to account for so large a growth. Based on these combined results, it appears that New Hampshire students score significantly above national norms at grade five, about equal to them at grade nine, and well above them again at grade 12. A more precise statement than that would require research far beyond the scope of this report.

The results of the writing sample show greater variety in the quality of writing displayed at both grades. Students at both grades tend to use phonetic spelling. They tend to be better in the mechanical aspects of writing than they are in organizing their papers and developing ideas for writing. Fifth graders tend to be more imaginative in their writing while ninth graders express stronger feelings. Girls outperform boys by a wide margin at both grades, and the gap is far larger in the ninth grade than it is in the fifth.

III. History and Government

Samples of students in grades nine and 12 took two sets of multiple choice examinations in history and government. One test, written by the Department of Education, covered government and New Hampshire history. The other was the commercially published Cooperative Social Studies Test, designed to measure American history. Each test concluded with an open-ended question that tested the willingness of students to use the political process.

Ninth and twelfth graders took the same tests, and therefore the patterns of growth could be observed readily. The growth was quite uniform. On only one objective in the government and New Hampshire history test was the change from the ninth grade average to the twelfth grade average different by more than 3 percent from the average for the entire test, and that objective was measured by just three test items. Therefore, the strengths shown by twelfth graders were the same as those for the younger students; likewise, their weaknesses were very similar.

There were few areas of knowledge measured on the test that were widespread enough to be called universal; just two questions were answered correctly by more than nine out of ten twelfth graders. The first required knowing, given that the House of Representatives is one part of the Congress of the United States, that the other part is the Senate. In the second question, students were shown an arrowhead and had to deduce that finding such an object would strongly suggest that the location had been occupied or visited at one time by Indians (as opposed to Italians, Jews or Scots-Irish). An additional question that was answered correctly by almost nine out of ten required knowing that the United States Constitution provides the right to attend the church of one's choice.

There were an additional 13 questions that over three out of four twelfth graders could answer correctly. These including knowing that, when given a traffic ticket, one is likely to appear in District or Municipal Court; that the head of a government in a city is usually called a mayor; that the school board is the agency that one would contact to protest the school budget; that bills must be passed by both the House and Senate to become law; that in 1900, most mail and freight coming to New Hampshire from other states arrived by railroad; and that a statement of civil rights can be found in the Constitution.

On the other hand, there were 12 questions answered correctly by fewer than one out of three twelfth graders (keeping in mind that random guessing would have provided a correct answer in one out of four tries). These included knowing that a Governor's aide is part of the executive branch, and that the General Court of New Hampshire is not a part of the judicial branch; that an effective way to express opposition to a bill is to contact the appropriate legislative committee and arrange to testify against it; or being able to identify the following: the MacDowell Colony, the Bretton Woods Conference; Benning Wentworth, Sarah Josepha Hale, and Celia Thaxter.

The percentage of correct responses increased by around ten percent from grade nine to grade 12. The percentage of correct responses increased most on items that were easier for ninth graders. Therefore, not many more twelfth graders could answer correctly the questions in the test that were hard for ninth graders; but on the items that around half the ninth graders could answer, far more twelfth graders could. The growth seemed uniform for history and government, as well for questions specific to New Hampshire and those of a more general nature. It is possible that the material in some questions has been covered in some school curricula but not in others. Therefore, a moderate number of ninth graders can answer the questions correctly. However, by the twelfth grade, more schools appear to have covered that material, since far more twelfth graders answered correctly.

On other questions, fewer twelfth graders than ninth graders answered correctly. The material is not being assimilated; it may not be a part of the school curricula at any grade level.

The results of the standardized achievement test tended to show much the same results as the test developed for use in New Hampshire. Performance there was uniform as well. Growth tended to be approximately equal in all areas. The students at both grades tended to do better in the more complex area of application and analysis of information, than they did on questions testing rote memorization.

At both grades nine and 12, students tended to be scoring above national norms. This finding was based on a very limited number of test questions. It also appeared that ninth graders were further above the norms than the twelfth graders. Given New Hampshire's higher leaver rate, this is somewhat surprising, but again must be tempered by the limited amount of information available.

The results of the open-ended questions indicated large differences between ninth and twelfth graders in one question, but little difference on the other.

The question with the large change asked, "Do you think you can have any influence on decisions of local government?" Almost one-sixth more twelfth graders answered this question positively than did ninth graders. A large part of this change can be attributed to the twelfth graders approaching (or reaching) voting age. The other question, which asked about how to change a school rule, was answered much the same way by both grades. The one significant change was the willingness of the older students to go to a higher level of authority to see the change take place. Students of both sexes responded much the same way at both grades.

TABLES

The results of the assessment were reported in terms of percentages of correct responses to each item; that is, the percentage of students who answered the item correctly. Open-ended test items and the writing samples were scored using methods developed by the National Assessment of Educational Progress (NAEP) and Educational Testing Service, and are reported as percentages of students falling in each of the categories defined by those agencies.

As stated earlier, the various tests were administered at these grades:

	Grade 5	Grade 9	Grade 12
Mathematics	x	x	
The English Language Arts	x	x	
Writing Sample	x	x	
Government and New Hampshire History		x	x
American History		x	x

In reading the tables to follow, it is important to understand that the percentages listed DO NOT reflect scores in the usual context of "test grades." Rather, the scores reflect the average percentage of correct responses for the test questions that refer to specific objectives. In Table I, following, the objectives are problem solving, applications, alertness to reasonable results, etc.

For example, note the figure 73.1 at the bottom of Table I. This figure means that students answered about 73 percent of the test questions right. Moreover, the students found the geometry section easier and the measurement section harder than the other sections.

MATHEMATICS

A. Findings at Grade 5

A sample of 939 students in the fifth grade were administered a 42 item multiple choice test. The 42 questions were divided into 7 clusters of objectives. Two objectives that were tested at the 9th grade level were not measured at grade 5. Table 1 shows, by objective, the average percentage of questions correctly answered, as well as the percentage of correct responses to the most extreme items within the cluster. The most extreme items are the two which were answered correctly by the fewest and most students. They are presented to give the reader an idea of the variability of item difficulty within each objective.

TABLE 1

Average Percentage of Correct Responses by 939 Fifth Grade Students in New Hampshire on the Grade 5 Mathematics Examination of the New Hampshire Educational Assessment Program, October, 1978, Reported by Objective

Objective	Number of Items in Objective	Percentage of Correct Responses		
		Average for Objective	Hardest Item in Objective	Easiest Item in Objective
1. Problem Solving	7	74.5	44.4	85.6
2. Applications	2	75.6	66.6	84.7
3. Alertness to Reasonable Results	7	59.0	36.2	92.3
4. Geometry	4	84.8	73.6	90.1
5. Measurement	4	49.9	28.0	75.4
6. Charts and Graphs	4	78.0	63.3	95.3
7. Using Math to Predict	Not Tested			
8. Calculators and Computers	Not Tested			
9. Appropriate Computational Skills	14	81.0	44.3	95.8
Total Test	42	73.1	28.0	95.8

B. Findings at Grade 9

A sample of 684 students in the ninth grade were administered a 51 item multiple choice test. One question was not scored. The remaining 50 questions were divided into 9 clusters of objectives. Table 2 shows, by objective, the average percentage of questions correctly answered as well as the percentage of correct responses to the most extreme items within the cluster.

TABLE 2

Average Percentage of Correct Responses by 684 Ninth Grade Students in New Hampshire on the Grade 9 Mathematics Examination of the New Hampshire Educational Assessment Program, October, 1978, Reported by Objective

Objective	Number of Items in Objective	Percentage of Correct Responses: Average for Objective	Hardest Item in Objective	Easiest Item in Objective
1. Problem Solving	10	54.2	33.5	78.5
2. Applications	2	40.0	25.9	54.1
3. Alertness to Reasonable Results	2	67.6	56.3	78.8
4. Geometry	8	62.8	19.4	94.6
5. Measurement	7	71.1	28.9	84.5
6. Charts and Graphs	5	77.0	48.1	94.9
7. Using Mathematics to Predict	4	51.9	33.6	75.4
8. Calculators and Computers	2	56.4	55.1	57.7
9. Appropriate Computational Skills	10	81.8	57.2	92.5
TOTAL TEST	50	65.6	19.4	94.9

THE ENGLISH LANGUAGE ARTS--MULTIPLE CHOICE TESTS

A. Findings at Grade 5

A sample of 942 fifth grade students took a 43 item multiple choice exam in the English language arts. The 43 questions were divided into 4 objectives. Table 7 shows, by objective, the average percentage of questions correctly answered in each objective, as well as the percentage of correct responses to the most extreme items within each cluster.

TABLE 7

Average Percentage of Correct Responses on the English Language Arts Examination of the New Hampshire Educational Assessment Program by a Sample of 942 Fifth Grade Students in New Hampshire, October, 1978, Reported by Objective

Objective	Number of Items in Objective	Percentage of Correct Responses		
		Average for Objective	Hardest Item	Easiest Item
1. Word Meaning	9	93.3	89.7	97.5
2. Reading Comprehension	27	80.1	55.7	93.5
3. Study Skills	6	77.8	69.9	87.3
4. Literary Forms	1	88.5	-	-
Total Test	43	82.7	55.7	97.5

B. Findings at Grade 9

A sample of 681 ninth grade students took a 52 item multiple choice exam in the English language arts. The 52 questions were divided into 3 objectives. Table 8 shows, by objective, the average percentage of questions correctly answered in each objective, as well as the percentage of correct responses to the most extreme items within each cluster.

TABLE 8

Average Percentage of Correct Responses on the English/ Language Arts Examination of the New Hampshire Educational Assessment Program by a Sample of 942 Ninth Grade Students in New Hampshire, October, 1978, Reported by Objective.

Objective	Number of Items in Objective	Percentage of Correct Responses: Average for Objective	Hardest Item	Easiest Item
1. Word Meaning	9	86.1	61.8	96.9
2. Reading Comprehension	34	74.4	42.3	91.9
3. Study Skills	9	74.2	54.8	91.9
TOTAL TEST	52	76.4	42.3	96.9

TABLE 14

Average Percentage of Correct Responses by 643 Ninth Grade Students in New Hampshire on the New Hampshire History and Government Examination, October, 1978, Reported by Objective

Objective	Number Of Items in Objective	Percentages of Correct Responses: Average for Objective	Hardest Item in Objective	Easiest Item in Objective
Government - Total	26	53.0	22.1	82.0
1. Relationships Between Branches	6	50.7	27.4	65.9
2. Basic Purposes of Government	12	55.3	22.1	75.3
3. How Citizens Influence Government	8	51.1	23.2	82.0
History - Total	38	45.8	11.7	85.7
1. Ethnic Origins	3	45.9	25.8	65.2
2. Relationships to Physical Environment	8	61.8	37.9	76.0
3. Course of History	5	41.8	22.4	59.3
4. How History is Recorded	7	51.3	26.4	85.7
5. Knowledge of Events	15	35.9	11.7	61.4
Total Test	64	48.7	11.7	85.7

B. Findings at Grade 12

A sample of 962 twelfth graders took the same examination in government and New Hampshire history as was taken by the ninth graders. Table 15 is a summary of their performance.

TABLE 15

Average Percentage of Correct Responses by 962 Twelfth Grade Students in New Hampshire on the New Hampshire History and Government Examination, October 1978, Reported by Objective

Objective	Number of Items in Objective	Percentage of Correct Responses: Average for Objective	Hardest Item in Objective	Easiest Item in Objective
Government - Total	26	62.7	24.4	90.3
1. Relationships Between Branches	6	61.6	31.3	79.1
2. Basic Purposes of Government	12	64.9	25.9	89.1
3. How Citizens Influence Government	8	60.1	24.4	90.3
History - Total	38	55.1	11.2	92.8
1. Ethnic Origins	3	51.4	26.7	78.6
2. Relationships to Physical Environment	8	72.0	48.1	84.5
3. Course of History	5	52.3	27.5	69.0
4. How History is Recorded	7	63.5	27.2	92.8
5. Knowledge of Events	15	43.9	11.2	71.0
Total Test	64	58.2	11.2	92.8

TABLE 18

Percentage of Students in New Hampshire Responding to Question, "Do You Think You Can Have Any Influence on Decisions of Local Government?", Reported by Types of Response, by Grade and by Sex.

Response	Grade 9			Grade 12		
	Male	Female	Total	Male	Female	Total
Yes	35.3	36.3	35.8	54.4	50.6	52.3
Circulate or sign a petition	8.6	6.9	7.7	8.8	4.9	6.6
Vote, campaign or run for office	2.6	4.8	3.8	13.0	11.3	12.0
Join or form a group, lobby or political party	.4	1.2	.8	3.6	2.4	3.0
Contact an elected official	9.5	4.8	7.1	16.1	16.6	16.4
Talk to, write to, get in touch with other people	3.9	3.2	3.5	4.7	4.9	4.8
Other acceptable response	7.8	11.7	9.8	4.7	9.7	7.5
Other nonsense response	1.7	3.2	2.5	1.6	.4	.9
No response	.9	.4	.6	2.1	.4	1.1
No	64.7	63.7	64.2	45.6	49.4	47.7
Uninterested, don't care to	1.7	4.8	3.3	2.1	1.2	1.6
Too young to vote	14.7	11.7	13.1	8.8	13.8	11.6
Can be done but not by me	5.6	4.0	4.8	3.1	3.6	3.4
Can be done but not by people my age -- no one listens	26.3	23.4	24.8	13.5	14.2	13.9
Nobody can do anything -- even a group is ineffectual	2.2	1.6	1.9	6.7	3.2	4.8
I don't know	2.6	5.6	4.2	.5	4.0	2.5
Other nonsense response	4.7	7.7	6.3	4.1	2.4	3.2
No response	6.7	4.8	5.8	6.7	6.9	6.8

American History

Findings at Grades Nine and 12

As mentioned previously, the test in American history differed from all the others in that it was a publisher's standardized test, the Cooperative Social Studies Test (CSST). Because this test has been copyrighted it will not be possible to show specific questions.

This presentation of student performance will rely on comparisons to normative data. However, a few cautions must be expressed before any comparisons are made. The CSST norms were based on a slightly different student population from one that would be the best to use in making comparisons with New Hampshire public students. The CSST population included students in parochial and private schools.

Moreover, the representativeness of the CSST population is open to question in that 58 percent of the schools invited to be part of the norm group declined the invitation. While this is a customary event in the norming of standardized tests on a national basis, there is no assurance that those remaining schools were representative of schools as a whole.

A third thing to keep in mind when making comparisons of New Hampshire students to the national norm population of the CSST is that the CSST norms are 15 years old; older than most of the students in the ninth grade. It is known widely that achievement test scores at the high school level have fallen dramatically in the years since those norms were obtained. One would expect that if the test were renormed today, the new norms would be lower compared to the 1964 norms. This means that an average New Hampshire student performance would not be as good as the 1964 national performance.

With this occurring, it could not be expected that New Hampshire students, on the average, would attain the norms, and this was the case. Two forms of the test were administered, with a sample of 329 ninth graders and 497 twelfth graders taking Form A, and 348 ninth graders and 492 twelfth graders taking Form B. The overall results on both tests were much the same, with ninth graders averaging 12 percent below the norm group on both forms and twelfth graders scoring two percent below that same junior high school norm of Form A, and one percent above that norm on Form B.

The questions on each form ostensibly measured four basic content areas: "Relations with Other People and Nations," "Government and Politics," "Economic Development," and "Social and Cultural Developments." Within each of these four content areas, three types of skills were measured: Remembering, Understanding and Analyzing. Thus, there were a total of 12 areas measured--three skill areas for each of the four content areas.

The results for both the ninth and twelfth graders, compared to national norms, were very uniform across both the content areas and skill areas. There was one skill-content area in which both ninth and twelfth grade students scored further below the norm than the average for the test. This was the skill of remembering in the content area entitled "Relations with Other People and Nations." Students did not score consistently poorly throughout this category, but did perform far below the norms on factual questions relating to the exploration and settlement of the New World. For example, well over half of the twelfth graders thought the first permanent settlement in the United States was made in New England, and only around half could identify on a map where Columbus had landed.

One area showed particularly strong results--"Economic Development." Both ninth and twelfth graders scored scored close to the national norms, higher than was expected. Additionally, this area showed a greater growth from grade nine to grade 12 than the other areas. The questions consisted of presenting the point of view of four speakers, and then asking the students to interpret those viewpoints. This is a skill which requires the combination of both the English language arts and social studies skills. Thus, it would seem that, while students in New Hampshire are weaker in the memorization area, they are stronger in the more complex areas of application and analysis of information.